

ENGLISH TRANSLATION OF THE INTERNATIONAL APPLICATION
FOR NATIONAL PHASE SUBMISSION

12

Claims

1. Reception bush for a piezoactuator with two connection pins for electrical contacting of the piezoactuator, especially for a piezoactuator for driving an injector of an injection system for an internal combustion engine, with a first bush element (1) and a second bush element (2), with the first bush element (1) being connected in the assembled state to the second bush element (2), while through holes (4, 5) are arranged in the first bush element (1) for the two connection pins of the piezoactuator, characterized in that, at least one guide (12) for the two connection pins is arranged in the second bush element (2).
2. Reception bush in accordance with claim 1, characterized in that the guides (12) for the two connection pins are formed in one piece on the second bush element (2).
3. Reception bush in accordance with claim 1 or 2, characterized in that the guides (12) for the two connection pins are formed in one piece inside on the lateral surface of the second bush (2).
4. Reception bush in accordance with one of the previous claims, characterized in that the guides (12) for each of the two connection pins are embodied in a barrel shape in each case.
5. Reception bush in accordance with one of the previous claims,

ENGLISH TRANSLATION OF THE INTERNATIONAL APPLICATION
FOR NATIONAL PHASE SUBMISSION

13

characterized in that

the guides (12) for the connection pins of the piezoactuator are embodied as transverse supports in each case and prevent a transverse movement of the guided ends of the connection pins.

6. Reception bush in accordance with one of the previous claims,

characterized in that

the guides (12) for the connection pins of the piezoactuator are embodied as an axial support and prevent an axial movement of the connection pins at least in an axial direction.

7. Reception bush in accordance with one of the previous claims,

characterized in that

the guides (12) for the connection pins of the piezoactuator are embodied as tipping moment supports and prevent a tipping movement of the connection pins.

8. Reception bush in accordance with one of the previous claims,

characterized by

an anti-rotation device (6, 8) for retaining a predetermined angular position between the first bush element (1) and the second bush element (2).

9. Reception bush in accordance with claim 8,

characterized in that, the anti-rotation device (6, 8) features a groove-spring connection, consisting of a groove (6) made in one of the two bush elements (1, 2) and a matching spring (8) formed in the other bush element (2), which engages with the groove (6) in the assembled state.

ENGLISH TRANSLATION OF THE INTERNATIONAL APPLICATION
FOR NATIONAL PHASE SUBMISSION

14

10. Reception bush in accordance with claim 8,
characterized in that
the groove (6) and/or the spring (8) features an insertion
taper (7, 9), with the insertion taper (7, 9) allowing pre-
assembly of the first bush element (1) and of the second bush
element (2) with an angular offset.

11. Reception bush in accordance with claim 10,
characterized in that
the maximum angular offset for pre-assembly lies in the range
of between 1° and 10° lies.

12. Reception bush in accordance with claim 10 or 11,
characterized by
a plug-in connection between the first bush element (1) and
the second bush element (2) with a predetermined plug-in
connection length, with the insertion taper (7, 9) only
extending in the axial direction over a part of the plug-in
connection length.

13. Reception bush in accordance with claim 12,
characterized in that the insertion taper (7, 9)
extends in the axial direction over 10% to 50% of the plug-in
connection length.

14. Reception bush in accordance with claim 12 or 13,
characterized in that
the groove (6) and/or the spring (8) extends, starting from
the free end of the relevant bush element (1, 2) in each case
at least over a part of the plug-in connection length, so that
the spring (8) engages even during of the putting together of
the two bush elements (1, 2) into the groove (6).

ENGLISH TRANSLATION OF THE INTERNATIONAL APPLICATION
FOR NATIONAL PHASE SUBMISSION

15

15. Reception bush in accordance with one of the claims 12 to 14,

characterized in that

the groove (6) and/or the spring (8) of the groove-spring connection extends over the entire length of the plug-in connection, with the insertion taper (7, 9) taking up a part of the plug-in connection length, whereas the anti-rotation device (6, 8) takes up the entire remainder of the plug-in connection length.

16. Reception bush in accordance with one of the claims 10 to 15,

characterized in that

the groove (6) and also the spring (8) features an insertion taper (7, 9).

17. Reception bush in accordance with claim 16,

characterized in that

the insertion taper (7) of the groove (6) has essentially the same insertion angle as the insertion angle (9) of the spring (8), so that the two insertion angles (7, 9) essentially slide planparallel on each other during assembly.

18. Reception bush in accordance with one of the previous claims,

characterized in that

the first bush element (1) in the assembled state is connected to the second bush element (2) by a snap-on connection (10, 11) which features a predetermined snap-on point.

19. Reception bush in accordance with claim 18,
characterized in that

ENGLISH TRANSLATION OF THE INTERNATIONAL APPLICATION
FOR NATIONAL PHASE SUBMISSION

16

the insertion taper (7, 9) only operates up to a maximum of the first snap-on point when the two bush elements (1, 2) are put together.

20. Reception bush in accordance with one of the claims 10 to 19,

characterized in that

the tapers (7, 9) run essentially straight and without bumps.

21. Reception bush in accordance with one of the claims 10 to 20,

characterized in that

the tapers (7, 9) pass into the anti-rotation device (6, 8) without any transition.

22. Reception bush in accordance with one of the claims 10 to 21,

characterized in that

there is a kink at the transition point between the insertion tapers (7, 9) and the anti-rotation device (6, 8).

23. Reception bush in accordance with one of the previous claims, characterized in that,

the first bush element (1) and the second bush element (2) each feature cutouts (3-5) in their end faces for guiding the piezoactuator.

24. Reception bush in accordance with claim 23,

characterized in that

the piezoactuator with the cutouts (3) forms a fit of which the angular play is greater than the angular play of the anti-rotation device, to prevent rotation forces on the piezoactuator.